Service Area Plan

Department of Health

Tuberculosis Prevention and Control (40503)

Service Area Background Information

Service Area Description

The purpose of this service area is to control, prevent, and eventually eliminate tuberculosis (TB) from the Commonwealth. Through a variety of activities, the service area strives to detect every case of TB, assure the adequacy and completeness of treatment, and prevent further disease transmission. This service area is administered by the Division of Tuberculosis Control (DTC). The service area also includes the Newcomer Health Program (NHP), which focuses on the health needs of refugees newly resettled in Virginia. Major activities include:

- Disease surveillance for all TB cases from time of initial suspicion through case disposition,
- Consultation to local health departments on treatment, diagnosis, case management, contact investigations, discharge planning, and media relations,
- Direct assistance in large-scale contact investigations, when clusters are identified, and when needed on individual cases,
- Development of policies ranging from preventing disease transmission to the proper use of personal protection equipment,
- Oversight of TB awareness activities for the public and training opportunities for local health department personnel,
- Assistance and guidance to local health departments when involuntary isolation of a recalcitrant patient is required to minimize risks to others in the community,
- Application and administration of federal grants to fund the TB program,
- Coordination and facilitation of the initial health assessments of all newly arriving immigrants with a refugee or asylum status,
- Collection of data on refugee arrivals, health conditions and outcome of their assessment data , and
- Notification to local health districts that a newly arrived immigrant or refugee requires screening for tuberculosis.

Service Area Alignment to Mission

This service area aligns directly with the mission of the Virginia Department of Health (VDH) by reducing morbidity and preventing the transmission of TB.

Service Area Statutory Authority

- Chapter 2 of Title 32.1 of the Code of Virginia pertains to the reporting and control of diseases.
- Sections 32.1-35 and 32.1-36 of the Code of Virginia and 12 VAC 5-90-80 and 12 VAC 5-90-90 of the Board of Health Regulations for Disease Reporting and Control mandates the reporting of specific diseases, including active and suspected cases of tuberculosis disease and tuberculosis infection in children under age four.
- Section 32.1-48 outlines the powers of the Commissioner to control epidemics.
- § 32.1-49 of the Code of Virginia specifically directs the Board of Health to include tuberculosis in the list of diseases required to be reported in 32.1-35.
- Section 32.1-50 of the Code of Virginia and 12 VAC 5-90-225 of the Board of Health Regulations for Disease Reporting and Control relates to the examination of persons reasonably suspected of having active tuberculosis disease, including authority for examination, report forms; report schedule; laboratory reports and required samples.
- § 54.1-2901 allows the collection of specimens of sputum or other bodily fluids from persons with tuberculosis and suspected tuberculosis by any Registered Nurse, acting as an agent of the Department, for submission to a public health laboratory.

Service Area Plan

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Service Area Customer Base

Customer(s)	Served	Potential
CDC	1	1
Colleges and universities	88	88
Concerned public	7,400,000	7,400,000
Correctional facilities	130	130
Health care providers - public and private sector	6,500	6,500
Homeless shelters	81	81
Hospitals	142	142
Laboratories	17	17
Legislators	140	140
Local health departments	119	119
Media	121	121
Other VDH offices and divisions	7	10
Persons with latent TB infection	70,000	350,000
Persons with suspected or confirmed TB disease	1,000	1,000
Refugee resettlement agencies	10	10
State and territorial health departments	58	58

Anticipated Changes In Service Area Customer Base

• Concerned public and TB cases are likely to be more culturally and linguistically diverse, reflecting the changing demographics of the Commonwealth.

• The number of nursing homes, assisted living and other congregate care facilities will likely grow as the population ages, exposing more people to situations with increased risks for transmission of TB.

• The population of jails and prisons may continue to grow. In addition, Virginia corrections facilities are increasingly used to house immigration prisoners, many of whom are from high TB prevalence areas. Immigration prisoners are frequently moved among correction facilities, and are unlikely to receive routine medical services available to other inmates.

• Consolidation of health care facilities and laboratory services is likely to result in out of state facilities providing services for Virginia TB cases.

Service Area Products and Services

- Consultation and Technical Assistance
  • Consultation on TB prevention, diagnosis and treatment for health departments and health care providers in the public and private sector
  • Consultation on health screening of refugees and asylees
  • Development of guidelines and procedures related to core mission – examples include contact investigation and sputum collection guidelines
  • Development of products to facilitate service delivery – examples include TB record forms, risk assessment tools, investigation and evaluation algorithms
  • Technical assistance to hospitals, clinics, long term care facilities, congregate living facilities, health departments and other facilities on matters related to facility design and maintenance, TB screening of employees and clients, and investigation of exposures
  • Implementation of statutory and regulatory requirements by development and publication of policies, procedures, and guidelines
- Direct Assistance
  • Direct assistance to health departments to assess possible outbreaks and facilitate large contact investigations
  • Coordination of referrals and information exchange for cases, suspected cases, contacts and other clients who move in or out of Virginia. Facilitate communication between local health districts for those moving within Virginia
  • Support (personnel and financial) for health departments to ensure that CDC mandated activities are carried out at the local level
  • Support (personnel and financial) for health departments experiencing increased numbers of TB cases
  • Direct assistance in management of difficult cases with complicating factors such as homelessness
- Education and Training Activities
  • Provision of training for health care providers in public and private sectors
  • Development and dissemination of educational materials for patients and the public – English and other languages to meet needs of patients and the public. Examples include pamphlets, fact sheets, web site, media presentations
  • Preparation of informational materials for elected officials and other decision-makers
  • Serve as speakers at conferences and meetings on matters related to TB prevention and control and refugee health conditions of public health importance
  • Development of fact sheets, press releases, interviews, other products as required to address media requests
- Planning and Evaluation
  • Periodic evaluation of local district TB prevention and control activities
  • Production of reports for local, regional and national use in TB program planning and evaluation
  • Participation in local, regional and national TB control planning activities
  • Participation in local, regional and national refugee resettlement planning and evaluation activities
- Surveillance and Data Analysis
  •Collection of TB case reports and other surveillance data from health departments; verification of data; data analysis; transmission of data for inclusion in the national TB registry
  •Collection of data on health screening of refugees and asylees from local health departments;

Service Area Products and Services

verification of data; data analysis; production of reports for local, regional and national use in program planning and evaluation.

Factors Impacting Service Area Products and Services

• Population growth and changing demographics in Commonwealth.
• Larger number of foreign born residents; newcomers increasingly from countries with high TB rates.
• Newcomers settling in areas of the state where local support services are limited.
• Significant numbers of international visitors, students, undocumented aliens – i.e., non-citizen, non-permanent residents with limited eligibility for services - are entering state.
• Virginia residents (permanent and non-permanent) increasingly travel between US and high TB prevalence countries, so have repeated opportunities for exposure to TB.
• TB in usually productive, employed adults may result in loss of job, sudden poverty, loss of housing, lack of funds for necessities (e.g., groceries) for patient and family. Support services are limited or unavailable for other than citizens and legal permanent residents.
• Persons with serious underlying medical conditions (HIV infection, diabetes, end stage renal disease, collagen-vascular diseases) are surviving longer, so have more years at risk for re-activating latent TB infection or progressing to active TB if newly infected. Immunocompromised patients with TB may be more difficult to diagnose (increasing opportunities for transmission to others) and are more difficult to manage.
• National and state standards for the management of TB cases and their contacts are increasingly effective in curing patients and limiting transmission, but are also increasingly labor intensive and costly.
• The majority of TB patients are underinsured or uninsured, limiting access to health care services in the private sector.
• Public health services at the district and local level are uneven across the Commonwealth and very limited in several districts.
• Fewer Public Health Nurses and other local health department personnel with TB management experience.
• Few regional TB clinics remain.
• Few private sector health care providers with experience or interest in TB.
• English speaking clients with limited literacy and non-English speaking clients make case management and patient education difficult.

Anticipated Changes To Service Area Products and Services

• Some re-centralization of TB prevention and control services (i.e., return of some consultation, involvement in contact investigations, assistance to districts in collecting data for surveillance systems) is occurring. Balancing local needs and resources with state requirements and resources is and will be an ongoing activity at both the central office and in the districts.
• Federal funding is likely to remain level or decrease, and Cooperative Agreement funds are increasingly categorical – i.e., with very specific requirements or restrictions on activities for which the funds may be used.
• Greater need for services to be ethnically and linguistically diverse.
• Greater emphasis on program evaluation.
• Changing public health workforce (e.g., smaller numbers of workers, fewer physicians and nurses) at a time of increasing pressure to meet standards of care will force re-evaluation of how and by whom TB prevention and control services are provided.
• The public health workforce has increasing and diverse responsibilities. TB prevention and control services at the local level must compete with other mandated/high priority activities.

Service Area Financial Summary

Tuberculosis Prevention and Control is supported by both general funds and federal funds. The Federal funds come through a categorical cooperative agreement from the Centers for Disease Control and Prevention and are intended to supplement (not replace or supplant) state and local resources.

	Fiscal Year 2007		Fiscal Year 2008	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Base Budget	$719,939	$1,097,093	$719,939	$1,097,093
Changes To Base	$38,390	$13,277	$38,390	$13,277
SERVICE AREA TOTAL	**$758,329**	**$1,110,370**	**$758,329**	**$1,110,370**

Service Area Objectives, Measures, and Strategies

Objective 40503.01

Reduce the occurrence of TB disease among Virginia residents

Reducing the incidence of TB disease is critical to achieving eventual elimination of the disease. TB is an airborne disease that is transmitted from person to person. Transmission can occur when a patient with TB disease of the lungs coughs TB bacteria into the air. A person in close contact with the patient can breathe the TB bacteria into his lungs and become infected. That person may also develop active TB, and may transmit infection to others, or may develop latent infection – i.e., TB infection that is limited so the person is not sick. The person with latent infection may develop active (and potentially infectious TB) later in life.

This Objective Supports the Following Agency Goals:

- Prevent and control the transmission of communicable diseases.

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This Objective Has The Following Measure(s):

- **Measure 40503.01.01**

  The proportion of patients who complete an adequate and appropriate course of treatment within 12 months of treatment initiation.

  Measure Type: Outcome **Measure Frequency:** Annually

  Measure Baseline: During the five-year period from 1998-2002, Virginia averaged a completion rate of 91.7%.

  Measure Target: At least 94% by end of FY08.

  Measure Source and Calculation:

  Data are collected from patient records that are maintained at the local health department level. A public health nurse case manager is responsible for monitoring the patient until the case is closed. Treatment initiation and completion dates for each patient are entered into a database. The number of days on treatment is calculated to determine if treatment was completed in fewer than 366 days. For some cases, a 12-month regimen is not recommended or not possible (e.g., TB resistant to several medications, patient with side effects from drugs requiring temporary discontinuation of treatment and an alternate treatment regimen). Those cases are excluded when completion rates are calculated.

Objective 40503.01 Has the Following Strategies:

- All TB cases will have a public health nurse case manager assigned to follow the patient until the case is closed. The case manager will be responsible for coordinating the overall care for the patient and ensuring that all components of the contact investigation are completed. The case manager will ensure that the correct medications are prescribed in the correct doses, and that the patient receives all medications as scheduled, so the maximum possible of number of cases complete treatment in the recommended 12 months. Patients not eligible to complete a course of treatment within 12 months (e.g., TB resistant to several medications, patient with side effects from drugs requiring temporary discontinuation of treatment and an alternate treatment regimen) will also be monitored to ensure that they receive a complete course of treatment and are cured of their TB. Timely, effective, and complete therapy offers the best chance of cure for the patient, and minimizes the period of infectiousness, decreasing the risk of transmission of TB to others in the community.

- All TB patients will be assessed for infectiousness and activities restricted, if necessary, until the nurse case manager, in consultation with the district health director, judges the patient to be non-infectious and clears the patient to return to work, school or other normal activity. Restriction of the patient's activity decreases the risk of transmission of TB to others in the community.
- For all cases with an initial positive culture for TB, drug susceptibility studies will be performed. The case manager will review the results with the health care provider and district health director. Prompt recognition of resistance of a TB bacillus to the commonly prescribed medications allows treatment regimens to be changed if necessary to ensure the patient receives the most appropriate medications to treat his TB, thus improving chances for cure, and minimizing risks that drug resistant TB will be transmitted to others in the community.
- For all infectious pulmonary cases, and in other cases where patient compliance is a concern, a healthcare worker will observe the patient swallowing the medications. This technique, referred to as "Directly Observed Therapy" (DOT) will assure that the patient ingests all doses of all medications, and that any side effects will be detected early.
- Patient incentives (e.g., nutritional supplements) and enablers (e.g., assistance with transportation to clinic appointments) will be used as necessary and appropriate to facilitate DOT and to encourage the patient to be compliant with the treatment regimen.
- Newly diagnosed TB cases and suspected cases will be reported to the central office as soon as a TB diagnosis is suspected. This will allow central office personnel to ensure that all required demographic and clinical information is collected so case counts and treatment records are complete and accurate.
- All case reports, contact investigation and patient treatment data will be analyzed at least semi-annually. Where possible problems are identified (e.g., missing data on case reports, unusual numbers of patients requiring more than 12 months to complete treatment), more complete evaluations of program at district and central levels will be undertaken.
- Training and educational activities will be planned and offered for health department personnel and for others in the public and private sector who are involved in TB prevention and control. These training sessions will provide current information to facilitate early recognition of disease and proper follow-up. Diagnosis and treatment of TB cases in accordance with current guidelines, and management of close contacts of cases to ensure appropriate evaluation and completion of preventive treatment will be emphasized.